GROUNDWATER MONITORING AND PRODUCT RECOVERY PROGRESS REPORT FOR ARAMARK UNIFORM SERVICES, INC. 330 CHESTNUT STREET OAKLAND, CALIFORNIA

March 95

PREPARED FOR
ARAMARK UNIFORM SERVICES, INC.
SCHAUMBURG, ILLINOIS

PREPARED BY
RMT, INC.
MARINA DEL REY, CA

MARCH 1995

James W. Van Nortwick, Jr., Ph.D., P.E.
Project Manager

RMT, INC. — LOS ANGELES
4640 ADMIRALTY WAY SUITE 301
MARINA DEL REY CA 90292-6621
310/578-1241 310/821-3280 FAX

March 15, 1995

ENVIRONMENTAL PROTECTION
95 MAR 22 PM 2:47

Ms. Jennifer Eberle
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

RE: Quarterly Groundwater Monitoring and Product Recovery Progress Report, and Monitoring Well Installation Workplan
Aramark Uniform Services, Inc.
330 Chestnut Street, Oakland, California

Dear Ms. Eberle:

This letter transmits the results of the groundwater monitoring and remedial activities conducted on February 3, 1995, at the referenced facility. In addition, enclosed you will also find a copy of the Monitoring Well Installation Workplan.

If you have any questions regarding this report, please feel free to contact me at (310) 578-1241, or Bob Robbins at (608) 592-3222.

Sincerely,

James W. Van Nortwick, Jr., Ph.D., P.E.
Senior Project Manager

encl: Quarterly Groundwater Monitoring and Product Recovery Progress Report
Monitoring Well Installation Workplan

cc: Robert J. Robbins, C.P.G.
Phillip J. Krejci

RMT, INC.

RMT, INC. – LOS ANGELES
4640 ADMIRALTY WAY SUITE 301
MARINA DEL REY CA 90292-6621
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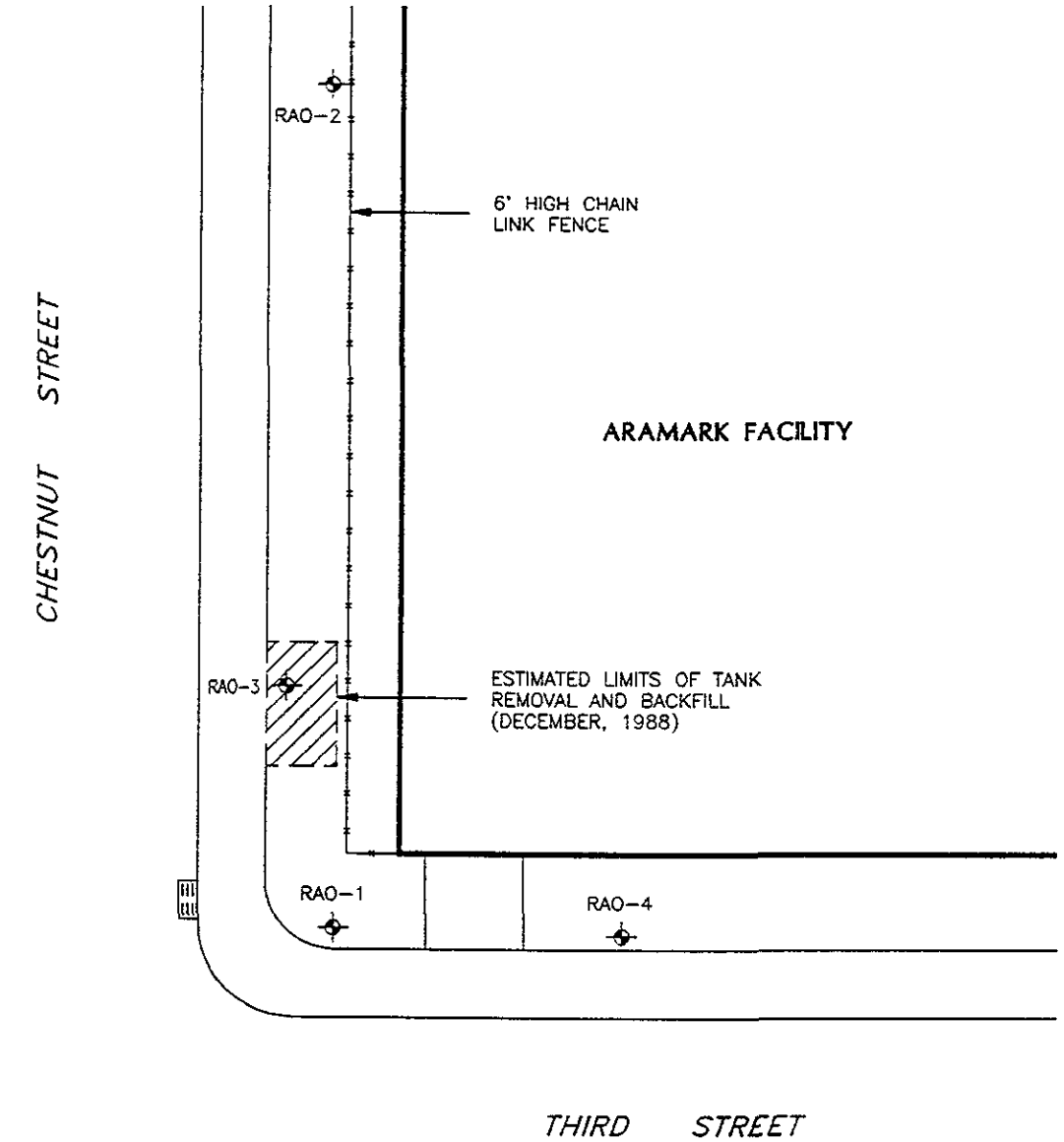
Section 1
INTRODUCTION

1.1 Background

Aramark Uniform Services, Inc., (ARAMARK) owns and operates an industrial laundry facility located at 330 Chestnut Street in Oakland, California. A 2,000-gallon underground diesel fuel storage tank was formerly maintained at this facility to supply fuel for the operation of a boiler. The diesel fuel storage tank was removed from the facility in December 1988 and a tank closure documentation report was submitted to the Alameda County Health Care Services Agency (ACHCSA). Based on the information presented in the tank documentation report, the ACHCSA requested that ARAMARK conduct post-closure sampling activities to determine whether the soil and groundwater surrounding the underground storage tank had been impacted by petroleum hydrocarbons.

Remedial investigation activities were conducted by RMT from March 1989, through November 1992, and included the advancement of soil borings and groundwater monitoring wells in the vicinity of the former excavation area. The results of chemical analyses performed on groundwater samples collected from monitoring wells RAO-1, RAO-2, RAO-4, during the period from November 1992 through May 1993 did not identify the presence of total petroleum hydrocarbons (TPH), however, groundwater sampling activities conducted in May 1993, identified the presence of benzene, toluene, and xylenes (BTEX) in groundwater samples collected from monitoring wells RAO-1 and RAO-2. A site plan showing the location of the monitoring wells is presented in Figure 1.

Because the results of the sampling activities indicated that the extent of petroleum hydrocarbon contamination was limited to the area immediately surrounding the former tank excavation and free-product was consistently observed in the groundwater monitoring well located within the former underground storage tank excavation, a product recovery canister was installed in December 1992. To date, the product recovery system has recovered approximately 5,906-mL of free-product.



SITE PLAN

ARAMARK UNIFORM SERVICES INC.
330 CHESTNUT STREET
OAKLAND, CALIFORNIA

LEGEND:

RAO-4 — GROUNDWATER MONITORING WELL, BY RMT 6/89

0 20 40

APPROXIMATE SCALE IN FEET

RMT INC

DWN BY	CPB
APPROVED BY	
DATE	NOVEMBER 1994
PROJ #	12013 12
FILE #	1006

FIGURE 1

1.2 Purpose and Scope

The purpose of this report is to summarize the results of the groundwater monitoring activities conducted on February 3, 1995, at the ARAMARK facility. The scope of work conducted during the groundwater investigation included the following:

- The purging and sampling of three groundwater monitoring wells.
- The chemical analyses of groundwater samples for the presence of BTEX and TPH-D using EPA SW-846 Method 8020 and Method 8015M.
- Product recovery activities.

Section 2
GROUNDWATER MONITORING ACTIVITIES

Groundwater sampling activities were conducted on February 3, 1995, and included obtaining static water level measurements and groundwater samples from monitoring wells RAO-1, RAO-2, and RAO-4. Groundwater samples were not collected from monitoring well RAO-3 which is currently being utilized for product recovery.

2.1 Static Water Level Measurements

Prior to collecting groundwater samples, the depth to groundwater was measured in each monitoring well using an electronic water level indicator. Three rounds of groundwater heights were taken to assess any variability in measurement.

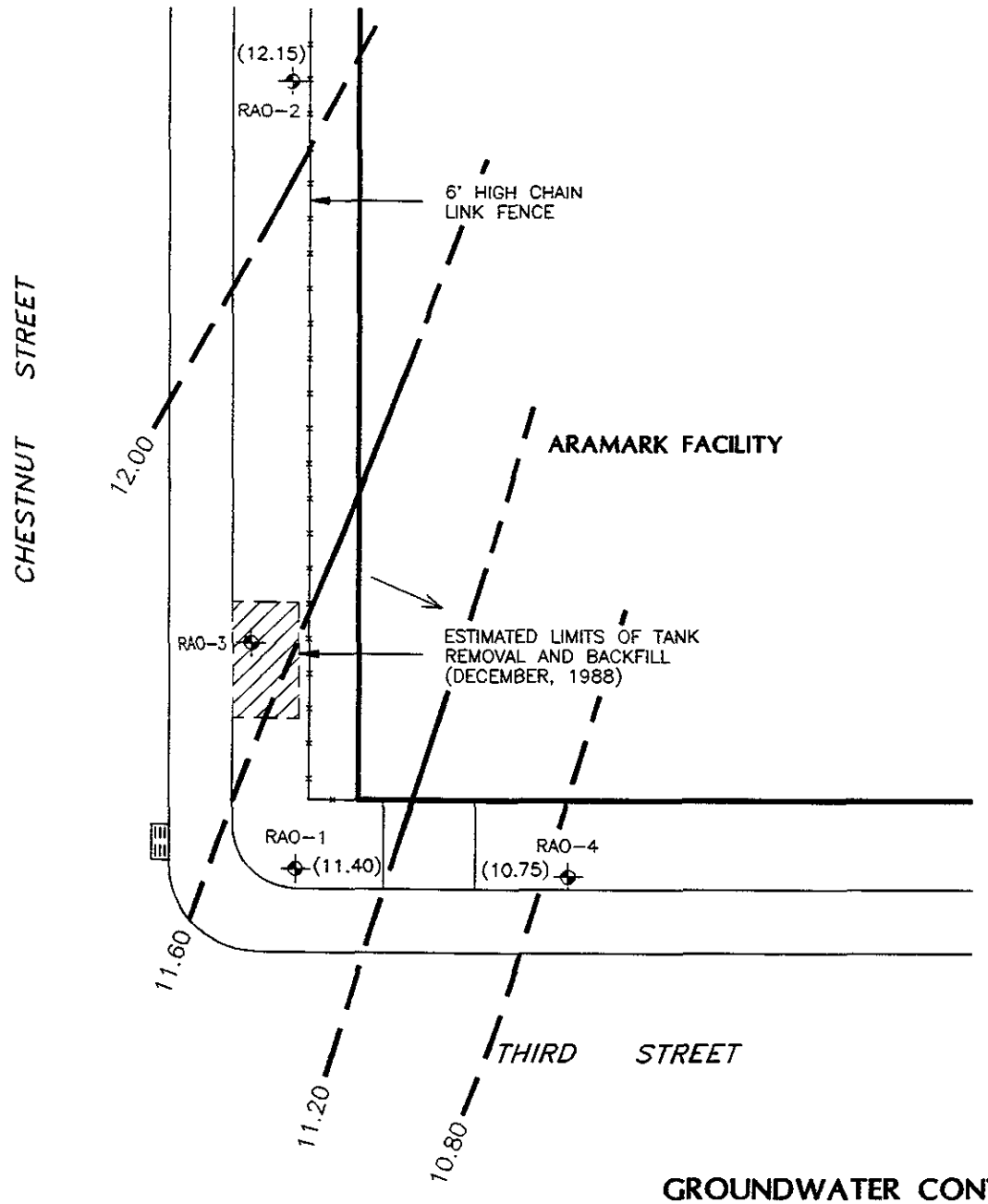
2.2 Groundwater Sample Collection

Groundwater samples were collected from monitoring wells RAO-1, RAO-2, and RAO-4. Prior to sampling, each monitoring well was purged using a bailer. A minimum of three well casing volumes (casing and sand pack volume) were extracted from each well before collecting groundwater samples. The temperature, pH, and conductivity of the extracted groundwater was measured and recorded at least once per well casing volume. The well casing volume was determined by measuring and recording the static water level and calculating the well volume. The purging bailer was decontaminated between each sampling event by rinsing with tap water to remove particulates, washing with a tri-sodium phosphate solution, and rinsing with deionized water.

After each monitoring well had recharged to within 80 percent of its pre-purge volume (approximately 15-min) groundwater samples were collected utilizing a disposable Teflon bailer equipped with a teflon stopcock, and dispensed directly into 40-mL borosilicate vials with teflon septa and screw caps. All samples were preserved using hydrochloric acid and stored on ice pending transport to a commercial independent California-certified laboratory according to US EPA protocol, including chain-of-custody procedures. Groundwater sample collection data are presented in Appendix A

2.3 Groundwater Flow

Static water level measurements and groundwater elevations for February 3, 1995, are summarized in Table 1 and the potentiometric surface generated from the water level data is presented in Figure 2. The groundwater flow direction is southwest with a gradient of approximately 0.02-ft/ft.



GROUNDWATER CONTOUR MAP
(FEBRUARY, 1995)

LEGEND:

RAO-4 — GROUNDWATER MONITORING WELL; BY RMT 6/89

12.00 — GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (DASHED WHERE INFERRED)

(10.75) — GROUNDWATER ELEVATION, IN FEET ABOVE MEAN SEA LEVEL

→ ESTIMATED DIRECTION OF GROUNDWATER FLOW

NOTE: ESTIMATED GRADIENT = 0.02 ft/ft

ARAMARK UNIFORM SERVICES INC.
330 CHESTNUT STREET
OAKLAND, CALIFORNIA

0 20 40

APPROXIMATE SCALE IN FEET

RMT INC

DWN BY	CRB
APPROVED BY	
DATE	NOVEMBER 1994
PROJ #	12013.12
FILE #	1006

FIGURE 2

TABLE 1

Static Water Level Measurement

Monitoring Well Location	TOC Elevation (ft above MSL)	Depth to Water (ft below TOC)	Groundwater Elevation (ft above MSL)
RAO-1	19.08	7.68	11.40
RAO-2	19.57	7.42	12.15
RAO-4	19.30	8.55	10.75
TOC = Top of casing MSL = Mean sea level			

2.4 Chemical Analyses of Groundwater

Groundwater samples collected from each monitoring well were analyzed for the presence of BTEX and TPH using EPA SW-846 Method 8020 and Method 8015M, respectively. The analytical results of the groundwater samples collected from wells surrounding the recovery well indicate that the product is not migrating. The results of the laboratory analyses are presented in Table 2 and copies of the laboratory report and chain-of-custody documentation are included in Appendix B. The laboratory analyses were performed by Curtis & Tompkins, Ltd., located in Berkely, California.

2.5 Disposal of Purged Groundwater

Groundwater extracted during monitoring well purging activities was contained in 55-gal DOT-approved drums, labeled with the date, generator's name, site location, source, and stored in a secured area pending characterization and disposal. Purgewater generated during the previous three groundwater sampling events was discharge to the East Bay Municipal Utility District (EBMUD) on February 3, 1995. A copy of the disposal approval letter is included in Appendix C.

TABLE 2

Chemical Analyses of Groundwater

Sample Location	Sampling Date	Parameter (µg/L)				
		Benzene	Toluene	Ethylbenzene	Xylenes	TPH-D
RAO-1	02-03-95	<0.5	<0.5	<0.5	<0.5	560
	11-18-94	<1.0	<1.0	<1.0	<1.0	<50
	08-12-94	<1.0	<1.0	<1.0	<1.0	<50
	04-28-94	<1.0	<1.0	<1.0	<1.0	<50
	01-29-94	<1.0	<1.0	<1.0	<1.0	<50
	11-11-93	<0.5	<0.5	<0.5	<0.5	<50 (a)
	08-02-93	<0.3	<0.3	<0.3	<0.5	<10
	05-11-93	0.4	0.5	<0.3	1.0	<10
	02-19-93	<0.3	<0.3	<0.3	<0.6	<100
	11-02-92	<0.3	<0.3	<0.3	<0.5	<10
RAO-2	02-03-95	<0.5	<0.5	<0.5	<0.5	<50
	11-18-94	<1.0	<1.0	<1.0	<1.0	<50
	08-12-94	<1.0	<1.0	<1.0	<1.0	<50
	04-28-94	<1.0	<1.0	<1.0	<1.0	<50
	01-29-94	<1.0	<1.0	<1.0	<1.0	<50
	11-11-93	<0.5	<0.5	<0.5	<0.5	<50 (a)
	08-02-93	<0.3	<0.3	<0.3	<0.5	<10
	05-11-93	0.4	1.0	<0.3	1.0	56
	02-19-93	<0.3	<0.3	<0.3	<0.6	<100
	11-02-92	<0.3	<0.3	<0.3	<0.5	<10
RAO-4	02-03-95	<0.5	<0.5	<0.5	<0.5	<50
	11-18-94	<1.0	<1.0	<1.0	<1.0	<50
	08-12-94	<1.0	<1.0	<1.0	<1.0	<50
	04-28-94	<1.0	<1.0	<1.0	<1.0	<50
	01-29-94	<1.0	<1.0	<1.0	<1.0	<50
	11-11-93	<0.5	<0.5	<0.5	<0.5	<50 (a)
	08-02-93	<0.3	<0.3	<0.3	<0.5	<10
	05-11-93	<0.3	<0.3	<0.3	<0.5	<10
	02-19-93	<0.3	<0.3	<0.3	<0.6	<100
	11-02-93	<0.3	<0.3	<0.3	<0.5	840

a- This sample was analyzed for TPH as gasoline

Section 3
PRODUCT RECOVERY ACTIVITIES

During groundwater monitoring activities conducted from March 1990, through November 1992, the presence of a free-product layer was identified in monitoring well RAO-3, located within the former underground storage tank excavation area. In December 1992, a product recovery system, consisting of a removable canister (a buoy sheathed by a semi-permeable hydrophobic membrane atop a product storage sump) was installed in monitoring well RAO-3. During the period from December 1992 through December 1994, approximately 5,727-mL of free-product was recovered. Product recovery activities conducted in January and February 1995 recovered a total of 180-mL of free product, bringing the total quantity recovered to approximately 5,907-mL. A summary of the product recovery operations is presented in Appendix D.

APPENDIX A
GROUNDWATER SAMPLE COLLECTION DATA

GROUNDWATER SAMPLING INFORMATION

Job Name	OAKLAND
Job Number	
Date	2/3/95

Monitoring Well Location	Purge Volume (gal)	Total Volume (gal)	Temperature (°C)	pH	Turbidity (NTU)	DTW	COND ~~Comments~~
RAO-1		1/2	20.6	6.92		7.68	0.003
			WELL PURGED		DRY		
RAO-2		1	20.9	6.76		7.42	0.003
		4	20.7	6.71			
			WELL PURGED DRY				
RAO-4		0.4	20.7	6.98		8.55	0.003
			WELL PURGED DRY				

APPENDIX B
LABORATORY REPORT

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

RMT, Inc.
4640 Admiralty Way
Suite 301
Marina Del Rey, CA 90292

Date: 17-FEB-95
Lab Job Number: 119808
Project ID: 12013
Location: Aramark - Oakland

Reviewed by: Teresa K Morrison

Reviewed by:

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 119808
CLIENT: RMT INC.
PROJECT ID: 12013
LOCATION: ARAMARK OAKLAND

DATE SAMPLED: 02/03/95
DATE RECEIVED: 02/03/95
DATE EXTRACTED: 02/06/95
DATE ANALYZED: 02/07,08/95
DATE REPORTED: 02/17/95

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	STODDARD RANGE (ug/L)	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)
119808-001	RAO-1	ND(50)	**	560 *
119808-002	RAO-2	ND(50)	ND(50)	ND(50)
119808-003	RAO-4	ND(50)	ND(50)	ND(50)
119808-METHOD BLANK		ND(50)	ND(50)	ND(50)

ND = Not detected at or above reporting limit. Reporting limit indicated in parenthesis.

* Sample chromatogram does not resemble diesel standard.

** Reported as diesel due to overlap of hydrocarbon ranges.

QA/QC SUMMARY: BS/BSD BATCH NO: 18920

RPD, %	7
RECOVERY, %	107

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 119808
CLIENT: RMT, INC.
PROJECT ID: 12013
LOCATION: ARAMARK OAKLAND

DATE SAMPLED: 02/03/95
DATE RECEIVED: 02/03/95
DATE ANALYZED: 02/06/95
DATE REPORTED: 02/17/95

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)	REPORTING LIMIT (ug/L)
119808-001	RAO-1	ND	ND	ND	ND	0.5
119808-002	RAO-2	ND	ND	ND	ND	0.5
119808-003	RAO-4	ND	ND	ND	ND	0.5
119808-004	TRIP BLANK	ND	ND	ND	ND	0.5
119808-METHOD BLANK		ND	ND	ND	ND	0.5

ND = Not detected at or above reporting limit.

Reporting Limit applies to all analytes.

QA/QC SUMMARY: BS/BSD BATCH NO.: 18912

RPD, %	<1
RECOVERY, %	96

RMT INC
LABORATORIES
Madison, WI 53717
744 Heartland Trail
Phone (608) 831-4444
FAX (608) 831-7530

Fox Valley, WI
Columbus, OH
Milwaukee, WI

Nashville, TN
Greenville, SC

Augusta, GA
Lansing, MI

Chicago, IL
Los Angeles, CA

Cincinnati, OH
Madison, WI

11980B

F-268 (R2/92)
(Use Black Ink Only)

CHAIN OF CUSTODY RECORD

№ 051604

Bottles Prepared by

Date/Time 2/3/95

Project No: 12013

Client: ARAMARK-OAKLAND

Lab No	Yr 95 Date	Time	Sample Station ID	Total Number Of Containers	8015 - DIESEL	8020	Filtered (Yes/No)	Preserved (Code)	MATRIX	Comments
RAO-1	2/3		RAO-1.195	4	/	/				
RAO-2	2/3		RAO-2.195	4	/	/				
RAO-4	2/3		RAO-4.195	4	/	/				STANDARD TAT
Trip blank			Logged on Hand SQW 2/3/95							CONTACT :- KEVIN BATE RMT, INC. 310-578-1241

Code. A - None
B - HNO3
C - H_2SO_4
D - NaOH
E - HCl
F - ____

SAMPLER Relinquished by (Sig) ①	Date/Time 2/3/95	Received by (Sig) ② Shipper Name & # Troye Windsor	Date/Time 2/3/95 1510
Relinquished by (Sig) ③	Date/Time	Received by (Sig.) ④ Shipper Name & #	Date/Time
Relinquished by (Sig) ⑤	Date/Time	Received by (Sig.) ⑥ Shipper Name & #	Date/Time

HAZARDS ASSOCIATED WITH SAMPLES

(For Lab Use Only)
Receipt Temp
Receipt pH

Custody Seal Present/Absent | Seal Intact/Not Intact | Seal #'s

APPENDIX C
PURGEWATER DISCHARGE APPROVAL

EAST BAY
MUNICIPAL UTILITY DISTRICT

FAXED 2-3-95

MICHAEL J. WALLIS
DIRECTOR OF WASTEWATER

February 3, 1995

Mr. James W. Van Nortwick
Senior Project Manager
RMT, Inc.
4640 Admiralty Way, Suite 301
Marina Del ray, CA 90292-6621

Dear Mr. Van Nortwick:

On February 2, 1995, you contacted me regarding the possibility of discharging approximately 3-55 gallons of groundwater collected from monitoring wells located on the property of Aramark Uniform Services, 330 Chestnut Street in Oakland. During our conversation, you were asked to submit information regarding the site investigation as well as monitoring results and chain of custody documentation. On February 2, 1995, the following materials were received from your office:

- Cover Letter/Groundwater Monitoring Summary
- Table 1 - Chemical Analyses of Groundwater
- Chain of Custody Documentation

A review of these materials has been conducted. Based on the information submitted, it is determined that the groundwater collected from monitoring wells RAO-1, RAO-2 and RAO-4 on April 28, August 11 and November 18, 1994 comply with East Bay Municipal Utility District (EBMUD) groundwater discharge limits.

Groundwater discharges require a permit with corresponding permit application fee, capacity fee, monitoring and testing charges and disposal charges. However, in light of the small volume of groundwater being proposed for discharge and the fact that wastewater discharges from Aramark Uniform Services are currently regulated under an existing Wastewater Discharge Permit (WWDP) issued by EBMUD, the groundwater discharges cited above will be allowed under the existing WWDP for Aramark. *The discharge point shall be the sampling location used by Aramark and EBMUD for wastewater discharge monitoring.*

If you have any questions or comments please do not hesitate to contact me at (510) 287-1607.

Sincerely,

FLORENCIO C. GONZALEZ
Wastewater Control Representative

FCG:fcg

P.O. BOX 24055 OAKLAND CA [illegible]

APPENDIX D
PRODUCT RECOVERY OBSERVATIONS

Appendix D

Product Recovery Observations

Sampling Date	Volume of Product Removed (mL)	Volume of Water Removed (mL)	Depth to Product (ft-bgs)	Depth to Water (ft-bgs)	Thickness of Product (ft)
12-03-92	0	20	8.65	8.67	0.02
12-04-92	0	0	8.61	8.63	0.02
12-08-92	18	0	8.52	8.52	0.00
12-09-92	10	0	8.24	8.24	0.00
12-10-92	0	3	8.02	8.02	0.00
12-14-92	30	200	8.28	8.29	0.01
12-15-92	0	0	8.32	8.32	0.00
12-16-92	0	0	8.52	8.52	0.00
12-18-92	18	0	8.63	8.66	0.03
12-21-92	10	0	8.39	8.42	0.03
12-22-92	20	30	8.56	8.58	0.02
12-23-92	18	0	8.35	8.37	0.02
12-24-92	22	0	8.42	8.53	0.11
12-28-92	15	0	8.53	8.64	0.01
12-29-92	20	0	8.58	8.60	0.02
12-30-92	18	0	8.22	8.24	0.02
01-04-93	23	18	8.45	8.47	0.02
01-05-93	12	0	8.28	8.30	0.02
01-06-93	10	0	8.05	8.48	0.43
01-07-93	8	0	8.64	8.66	0.02
01-08-93	3	10	8.36	8.37	0.01
01-11-93	8	0	8.02	8.16	0.14
01-12-93	13	8	7.68	8.06	0.38
01-13-93	45	0	7.64	8.04	0.40
01-14-93	40	0	8.00	8.32	0.32
01-15-93	40	0	7.98	8.30	0.32
01-18-93	48	0	8.00	8.11	0.11
01-19-93	50	0	8.00	8.22	0.22
01-20-93	44	0	8.00	8.02	0.02
01-21-93	5	40	7.84	8.00	0.16
01-22-93	450	42	7.74	7.98	0.24
02-04-93	25	500	7.99	8.45	0.46
03-25-93	380	70	8.11	8.20	0.09
04-09-93	500	18	8.11	8.20	0 09
04-23-93	210	60	7 49	7 51	0 02
05-03-93	560	90	8 54	8 58	0 04
05-11-93	38	114	8 35	8.45	0 10
05-20-93	1	0	8 39	8 42	0 03
06-02-93	5	65	8 37	8 41	0 04
06-18-93	100	0	8.46	8 57	0.14
07-09-93	150	0	8 20	8 25	0 05
11-11-93	40	80	7 98	7 91	0 07
12-10-93	20	25	8 62	8 59	0 03

Product Recovery Observations

Sampling Date	Volume of Product Removed (mL)	Volume of Water Removed (mL)	Depth to Product (ft-bgs)	Depth to Water (ft-bgs)	Thickness of Product (ft)
01-29-94	0	0	8.76	8.76	0.00
03-10-94	0	0	8.63	8.63	0.00
05-03-94	1,976	658	8.93	9.15	0.22
06-17-94	5.6	565	8.85	8.85	0.00
06-21-94	1	540	8.50	8.52	0.02
06-28-94	5	400	8.69	8.71	0.01
07-08-94	26	500	8.61	8.61	0.00
07-14-94	0	400	8.73	8.73	0.00
07-20-94	20	500	8.60	8.62	0.02
07-26-94	60	560	8.68	8.71	0.03
08-02-94	21	500	8.46	8.50	0.04
08-12-94	30	640	7.74	7.79	0.05
08-18-94	0	550	9.24	9.24	0.00
08-25-94	0	550	8.78	8.78	0.00
08-31-94	0	550	8.74	8.74	0.00
09-09-94	150	375	7.74	7.76	0.02
09-15-94	0	525	8.93	8.93	0.00
09-22-94	5	305	8.97	8.99	0.02
09-30-94	0	420	8.86	8.86	0.00
10-07-94	0	550	8.74	8.74	0.00
10-14-94	0	520	8.80	8.80	0.00
10-21-94	0	520	8.88	8.88	0.00
10-28-94	0	525	8.90	8.90	0.00
11-04-94	0	550	8.00	8.00	0.00
11-09-94	0	520	7.99	7.99	0.00
11-18-94	80	430	8.05	8.15	0.10
11-25-94	130	300	8.00	7.99	0.01
11-30-94	30	260	7.94	7.95	0.01
12-09-94	30	480	8.03	8.07	0.04
12-16-94	30	120	7.96	7.99	0.03
12-22-94	20	500	8.06	8.09	0.03
12-29-94	80	360	7.71	7.73	0.02
01-06-95	25	500	7.57	7.60	0.03
01-13-95	50	70	7.55	7.54	0.01
01-20-95	5	510	7 53	7 54	0.01
01-26-95	30	500	7.38	7 41	0 03
01-31-95	30	320	7 47	7.48	0.01
02-09-95	20	210	7 63	7 63	0.00
02-14-95	20	175	7.62	7.64	0.02
Total to Date	5,906.6	17,851			